IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS: **A.E. Mericas**   Examiner: J. West
                                                                                    Art Unit: 2857

APPLICATION NO.   **10/733,443**

FILED: **December 10, 2003**

TITLE: **EXTENDING WIDTH OF PERFORMANCE MONITOR
                  COUNTERS**

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Commissioner for Patents
MAIL STOP APPEAL BRIEF-PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Board of Patent Appeals and Interferences

<u>**APPELLANTS' REPLY TO EXAMINER'S ANSWER**</u>

This Reply is in response to the Examiner's Answer mailed on March 23,

2006. Applicant believes that no fee is necessary for submission of this Reply;

however, if any fee is deemed as being due respecting this Reply, Applicant authorizes

such fee to be charged to International Business Machines Corporation's Deposit

Account No. 09-0447.

1.   RESPONSE TO EXAMINER'S ARGUMENTS

For the sake of simplicity, Applicant again summarizes the claimed invention:

The present invention is a performance monitor having plural counting elements (e.g., performance monitor counters or PMC's) and at least one control element (e.g., a monitor mode control register or MMCR), where each counting element is controlled by the control element to pair or group the counting elements so that the overflow from one counting element can be directed to its pair/group. In a preferred embodiment of the present invention, when the number of events to be monitored is less than the number of counting elements, the control element groups the counting elements by dividing the number of available counting elements by the number of events being monitored by the counting elements; taking the integer portion of the result of this dividing step and assigning a number of counting elements, equal to that integer, to each of the events to be counted; and, if there are any remaining unassigned counting elements, assigning the unassigned counting elements to at least one of the events.

In the Examiner's Answer, the Examiner asserts that the Dharap reference is reasonably pertinent to the particular problem with which the inventor of the present invention was concerned. Applicant reiterates that the problem with which the inventor of the present invention was concerned is solving problems associated with the

fact that interrupts could not be used during initial hardware testing of a processor in a data processing system, or when the processor is executing time-sensitive code. See page 3, lines 12-15 of the present application.

In construing the second prong of the two-part Deminski test cited by the Applicant in the Appeal Brief on page 7, the Examiner incorrectly looks to the claims to determine the particular problem with which the inventor was involved. The Deminski test requires no such evaluation; in this particular case, reference to the specification reveals the problem with which the inventor was involved, as described above, and Dharap is concerned with the display of data on a small screen of a cellular telephone, which has no reasonable pertinence to solving the problem of an inability to use interrupts in certain situations involving hardware testing of a processor.

The Examiner implies that Gover, in teaching that a user may configure a performance monitor to monitor up to four events within a data processing system when the number of occurrences of selected events is anticipated to be less than 2^{16}, also suggests the provision of a structure that enables the MMCR to calculate the optimal division of the PMCs among the events being monitored. This is simply unsubstantiated by a reasonable reading of Gover. Gover merely teaches that an MMCR can allow control over which PMCs are used to monitor events, and this control enables the ability of certain of the PMCs to be used for overflow of other PMCs. This cannot properly be construed as teaching or suggesting the claimed division calculation of the present invention used to optimize the use of the PMCs.

Applicant reiterates its position, as stated in its Appeal Brief, that the Examiner has failed to provide any motivation for combining the references to arrive at the present invention.

2.   CONCLUSION

For the foregoing reasons and the reasons set forth in all papers of record, Applicants respectfully request this Board to overrule the Examiner's rejections and allow claims 1 and 3-5.

Respectfully submitted:

_____   /Mark D. Simpson/_____
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